

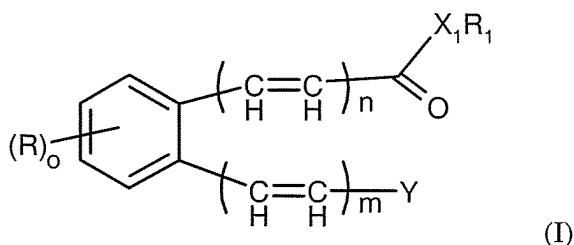
## AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions including the claims in the application.

Listing of the Claims:

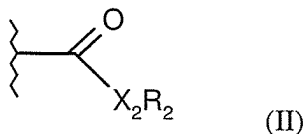
### CLAIMS:

1. (Original) A compound of formula (I)

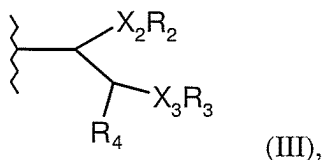


in which:

Y is a group of formula (II)



or of formula (III)



R is

H, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl or C<sub>5</sub>-C<sub>14</sub>-aryl, halogen, -CN, -OH, -O-C<sub>1</sub>-C<sub>6</sub>-alkyl, -O-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -O-C<sub>5</sub>-C<sub>14</sub>-aryl, -O-C<sub>2</sub>-C<sub>6</sub>-alkynyl, -NH<sub>2</sub>, -NH-C<sub>2</sub>-C<sub>6</sub>-alkyl, -NH-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -NH-C<sub>2</sub>-C<sub>6</sub>-alkynyl, -NH-C<sub>5</sub>-C<sub>14</sub>-aryl, -N(-C<sub>1</sub>-C<sub>6</sub>-alkyl)<sub>2</sub>, -N(-C<sub>2</sub>-C<sub>6</sub>-alkenyl)<sub>2</sub>, -N(-C<sub>2</sub>-C<sub>6</sub>-alkynyl)<sub>2</sub>, -N(C<sub>5</sub>-C<sub>14</sub>-aryl)<sub>2</sub>, -NH[-C(=O)-(C<sub>1</sub>-C<sub>6</sub>-alkyl)], -NH[-C(=O)-(C<sub>5</sub>-C<sub>14</sub>-aryl)], -NH-O-R<sub>1</sub>, -SH, -S-C<sub>1</sub>-C<sub>6</sub>-alkyl, -S-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -S-C<sub>1</sub>-C<sub>6</sub>-alkynyl or -O-C<sub>5</sub>-C<sub>14</sub>-aryl, wherein the abovementioned substituents are unsubstituted or substituted, one or more times, by a substituent independently

selected from C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl, C<sub>5</sub>-C<sub>14</sub>-aryl, where alkyl, alkenyl, alkynyl and aryl may be independently unsubstituted or substituted, once or twice, by a substituent independently selected from -OH, =O, -O-C<sub>1</sub>-C<sub>6</sub>-alkyl, -O-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -O-C<sub>5</sub>-C<sub>14</sub>-aryl, -C<sub>5</sub>-C<sub>14</sub>-aryl, -NH-C<sub>1</sub>-C<sub>6</sub>-alkyl, -NH-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -NH<sub>2</sub>, and halogen, wherein alkyl, alkenyl, alkynyl and aryl can be further substituted by a -CN, amide or oxime,

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are, independently of each other,

H, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl or C<sub>5</sub>-C<sub>14</sub>-aryl,

in which alkyl, alkenyl, alkynyl and aryl are unsubstituted or substituted, once or twice, by a substituent independently selected from -OH, -O-C<sub>1</sub>-C<sub>6</sub>-alkyl, -O-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -O-C<sub>5</sub>-C<sub>14</sub>-aryl, -C<sub>5</sub>-C<sub>14</sub>-aryl, -NH-C<sub>1</sub>-C<sub>6</sub>-alkyl, -NH-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -NH<sub>2</sub> and halogen, in which alkyl, alkenyl, alkynyl and aryl are independently unsubstituted or substituted, once or twice, by a substituent independently selected from -OH, =O, -O-C<sub>1</sub>-C<sub>6</sub>-alkyl, -O-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -O-C<sub>5</sub>-C<sub>14</sub>-aryl, -C<sub>5</sub>-C<sub>14</sub>-aryl, -NH-C<sub>1</sub>-C<sub>6</sub>-alkyl, -NH-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -NH<sub>2</sub> and halogen, in which said alkyl, alkenyl, alkynyl and aryl can be further independently substituted by a -CN, amide or oxime,

X<sub>1</sub>, X<sub>2</sub> and X<sub>3</sub> are, independently of each other, selected from

-CH<sub>2</sub>-, -CHR-, -NH-, -N(C<sub>1</sub>-C<sub>6</sub>-alkyl)-, -N(C<sub>2</sub>-C<sub>6</sub>-alkenyl)-, -N(C<sub>2</sub>-C<sub>6</sub>-alkynyl)-, -N[-C(=O)-(C<sub>1</sub>-C<sub>6</sub>-alkyl)]-, -N[-C(=O)-(C<sub>5</sub>-C<sub>14</sub>-aryl)]-, -N(C<sub>5</sub>-C<sub>14</sub>-aryl)-, -N(O-R)-, -O- and -S-,

n and m are, independently of each other,

2, 3, 4 or 5, and

o is

0, 1, 2 or 3,

excluding, however, compounds of formula (I) in which

o is 0,

n is 2,

m is 2 or 3,

X<sub>2</sub> and X<sub>3</sub> are O, and

R<sub>2</sub> and R<sub>3</sub> are C<sub>2</sub>H<sub>5</sub>,

and all double bonds possess the trans-configuration,

and/or stereoisomeric forms of compounds of formula (I) and/or a mixture of these forms in any ratio, and/or physiologically tolerated salts of compounds of formula (I).

2. (Previously presented) A compound of formula (I) as claimed in claim 1, wherein at least one polyene group has at least one *cis* double bond.

3. (Original) A compound of formula (I) as claimed in claim 1, wherein

R is H,

R<sub>1</sub> is H or C<sub>1</sub>-C<sub>6</sub>-alkyl,

R<sub>2</sub> is H or C<sub>1</sub>-C<sub>6</sub>-alkyl,

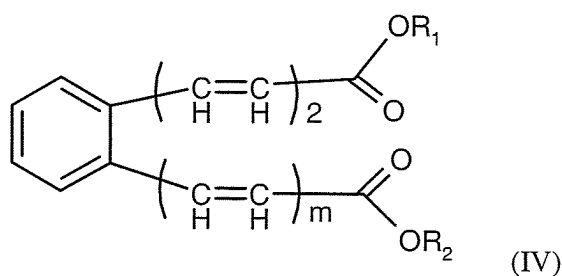
R<sub>3</sub> is H or C<sub>1</sub>-C<sub>6</sub>-alkyl,

R<sub>4</sub> is C<sub>1</sub>-C<sub>6</sub>-alkyl, and

X<sub>1</sub> and X<sub>2</sub> are -O-,

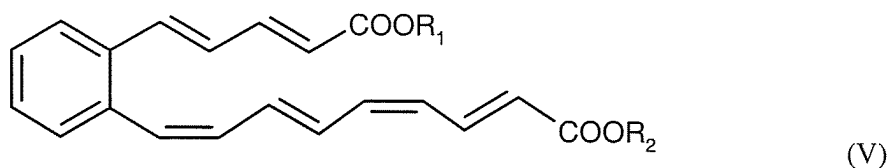
and the physiologically tolerated salts thereof.

4. (Original) A compound of formula (I) as claimed in claim 1, which is a compound of formula (IV)



wherein m is 3 or 4, and R<sub>1</sub> and R<sub>2</sub> are as defined in claim 1 and the physiologically tolerated salts thereof.

5. (Currently amended) A compound of formula (I) as claimed in claim 1, which is a compound of formula (V)



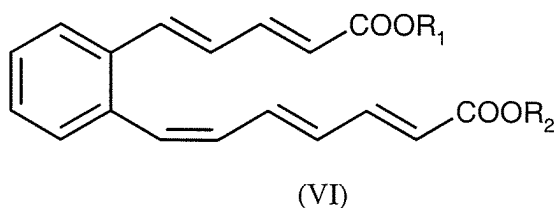
wherein R<sub>1</sub> and R<sub>2</sub> are as defined in claim 1 independently of each other,

H, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl or C<sub>5</sub>-C<sub>14</sub>-aryl,

in which alkyl, alkenyl, alkynyl and aryl are unsubstituted or substituted, once or twice, by a substituent independently selected from -OH, -O-C<sub>1</sub>-C<sub>6</sub>-alkyl, -O-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -O-C<sub>5</sub>-C<sub>14</sub>-aryl, -C<sub>5</sub>-C<sub>14</sub>-aryl, -NH-C<sub>1</sub>-C<sub>6</sub>-alkyl, -NH-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -NH<sub>2</sub> and halogen, in which alkyl, alkenyl, alkynyl and aryl are independently unsubstituted or substituted, once or twice, by a substituent independently selected from -OH, =O, -O-C<sub>1</sub>-C<sub>6</sub>-alkyl, -O-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -O-C<sub>5</sub>-C<sub>14</sub>-aryl, -C<sub>5</sub>-C<sub>14</sub>-aryl, -NH-C<sub>1</sub>-C<sub>6</sub>-alkyl, -NH-C<sub>2</sub>-C<sub>6</sub>-alkenyl, -NH<sub>2</sub> and halogen, in which said alkyl, alkenyl, alkynyl and aryl can be further independently substituted by a -CN, amide or oxime.

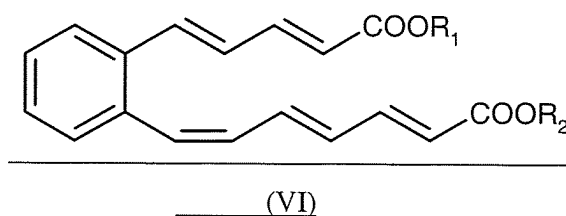
6. (Original) A compound of formula (V) as claimed in claim 5, wherein each of R<sub>1</sub> and R<sub>2</sub> is H.

7. (Original) A compound of formula (I) as claimed in claim 1, which is a compound of formula (VI)



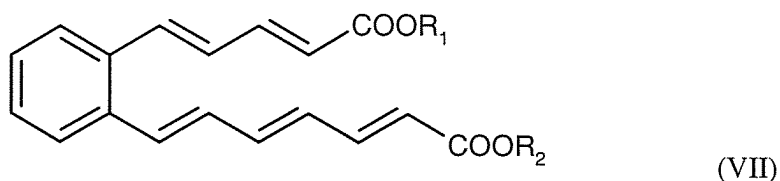
wherein R<sub>1</sub> and R<sub>2</sub> are as defined in claim 1.

8. (Currently amended) A compound of formula (VI) ~~as claimed in claim 7,~~



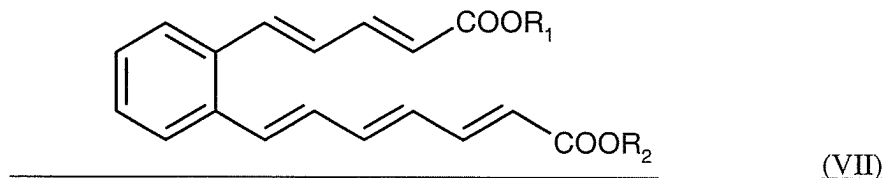
wherein R<sub>1</sub> and R<sub>2</sub> are each H.

9. (Original) A compound of formula (I) as claimed in claim 1, which is a compound of formula (VII)



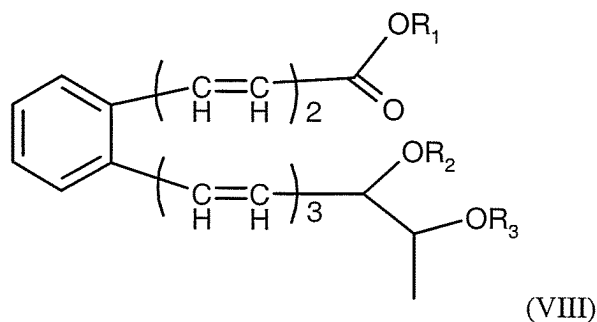
wherein R<sub>1</sub> and R<sub>2</sub> are as defined in claim 1.

10. (Currently amended ) A compound of formula (VII) ~~as claimed in claim 9,~~



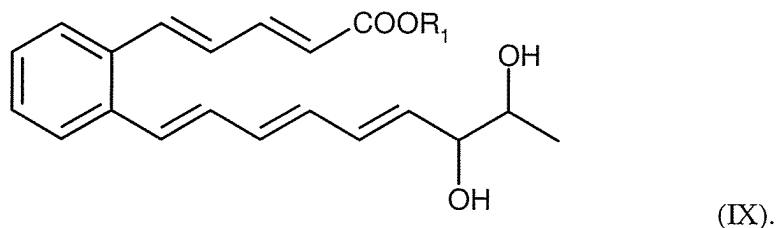
wherein R<sub>1</sub> and R<sub>2</sub> are each H.

11. (Currently amended) A compound of formula (I) as claimed in claim 1, which is a compound of formula (VIII)



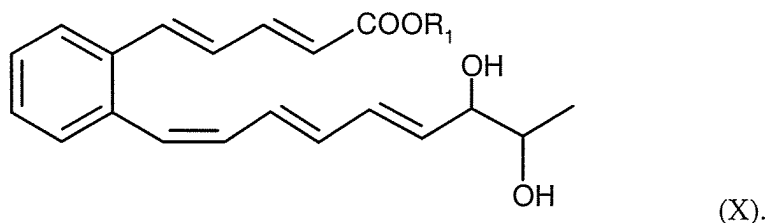
wherein R<sub>1</sub> and R<sub>2</sub> are as defined in claim 1.

12. (Original) A compound of formula (VIII) as claimed in claim 11, which is a compound of formula (IX)



13. (Original) A compound of formula (IX) as claimed in claim 12, wherein R<sub>1</sub> is H.

14. (Original) A compound of the formula (VIII) as claimed in claim 11, which is a compound of formula (X)



15. (Original) A compound of formula (X) as claimed in claim 14, wherein R<sub>1</sub> is H.

16. (Previously presented) A process for preparing a compound of formula (I) as claimed in claim 1, which comprises

1. culturing the microorganism *Actinomycetales* sp. DSM 14865 in an aqueous nutrient medium until one or more of the compounds serpentemycin A, B, C and D accrues in the culture broth, and
2. isolating and purifying said serpentemycin A, B, C and/or D.

17. (Cancelled)

18. (Previously presented) A process as claimed in claim 16, which comprises fermenting the microorganism *Actinomycetales* sp. DSM 14865 in a culture medium which contains a carbon and nitrogen source and also the customary inorganic salts and trace elements, isolating serpentemycins A, B, C and/or D and, optionally, converting said serpentemycins A, B, C and/or D into a pharmacologically tolerated salt.

19. (Original) A process as claimed in claim 16, wherein the fermentation is carried out under aerobic conditions at a temperature of between 20 and 35°C and at a pH between 4 and 10.

20. (Currently amended) A method for the treatment of an infectious bacterial disease comprising administering to a patient in need thereof an antibacterially effective amount of a compound of claim ~~15~~.

21. (Currently amended) A pharmaceutical composition for the treatment of infectious bacterial diseases comprising at least one compound as claimed in claim ~~15~~ and one or more physiologically suitable auxiliary substances.

22. (Currently amended) A process for producing a pharmaceutical composition ~~as claimed in claim 24~~ for the treatment of infectious bacterial diseases, which comprises combining at least one

compound as claimed in claim ~~4~~5, with one or more physiologically suitable auxiliary substances, into a suitable form for administration.

23. (Previously presented) The isolated microorganism *Actinomycetales* sp., DSM 14865.